Grassland Vegetation Monitoring
in the Southern Plains Network

Importance / Issues

Grassland vegetation is the most widespread vegetation type occurring in the Southern Plains Network (SOPN). Exotic species invasions, expanding row-crop agriculture, overgrazing, mineral exploration and establishment of woodlots and shelterbelts have all contributed to grassland degradation and loss of genetic diversity. Monitoring grassland vegetation communities will help SOPN park managers better understand the dynamic nature of these ecosystems and the processes that control them. Monitoring will also provide an early warning of abnormal conditions, which will allow managers to make effective decisions for mitigation.

Mixed-grass Prairie

Preliminary Monitoring Objective

1. Define trends in status of the vegetation species composition, structure, and diversity of remnant, disturbed, and restored prairies.
2. Determine trends in cool season (C_3) vegetation verses warm season (C_4) vegetation.
3. Determine long-term trends in invasive woody species abundance and distribution.
4. Determine long-term trends in exotic plant abundance and distribution.

Potential Measures

Grassland plant species composition, structure, frequency, percent cover, and more.

Protocol Development & Status

Karie Cherwin is leading the development of the SOPN grassland vegetation monitoring protocol, and the planned completion date is November 2007. SOPN's grassland monitoring plan will incorporate the soil structure and chemistry vital sign. This integrated design will be based on existing sampling methods (e.g., National Park Service Heartland and Northern Great Plains Networks, Bureau of Land Management, US Forest Service), but will be adapted to suit the specific needs of the Southern Plains.

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Short Grass Prairie